

REMARKS

Claims 1-43 are pending.

Claims 1-43 stand rejected.

Claims 1, 5, 9, 17-22, 27-31, 36, and 40 have been amended.

Specification Objection

The Examiner stated that portions of the specification lack clarity and are confusing, e.g. last paragraph, page 9. Based upon the 35 U.S.C. § 112, second paragraph, claim rejections of claims 5-8 and 27-43, Applicant assumes that the confusion and lack of clarity revolve around the notation “(1:N)”. Applicant on page 9, lns. 31-30 defined the notation “(1:N)” to represent “1 through N, and “N” is a variable number.” Thus, as illustrated by Figure 2, “Server 210 services a number of clients 230(1:N) at the same time.” Figure 2 illustrates three or more clients, namely, client 230(1), client 230(2), and client 230(N) with ellipses indicating that other clients may be present but are not expressly depicted. Thus, in Figure 2 there are N clients, 230(1) through 230(N). For example, if N equaled 5, then there would be five clients, namely, clients 230(1), 230(2), 230(3), 230(4), and 230(5).

Accordingly, Applicant respectfully submits that the above explanation clarifies the specification. Applicant respectfully requests withdrawal of the objection.

Claim Rejections - 35 U.S.C. § 112

Claims 5-8 and 27-43 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner asks what the notation “classifiers(1:M) implies”.

Applicant on page 9, lns. 31-30 defined the notation “(1:N)” to represent “1 through N, and “N” is a variable number.” Thus, as illustrated by Figure 2, “Server 210 services a number

of clients 230(1:N) at the same time.” Figure 2 illustrates three or more clients, namely, client 230(1), client 230(2), and client 230(N) with ellipses indicating that other clients may be present but are not expressly depicted. Thus, in Figure 2 there are N clients, 230(1) through 230(N). For example, if N equaled 5, then there would be five clients, namely, clients 230(1), 230(2), 230(3), 230(4), and 230(5).

Referring to claims 5, 27, 31, 36, 40, and claims dependent on claims 5, 27, 31, 36, or 40, “classifiers(1:M)” accordingly means classifiers 1 through M, where “M” is any positive number including 1.

Accordingly, Applicant respectfully submits that the above explanation provides the requested clarification. Applicant respectfully requests withdrawal of the rejections.

Claim Rejections - 35 U.S.C. § 102

Claims 1-43 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,332,163, issued to Bowman-Amuah (referred to herein as “*Bowman-Amuah*”). Applicant respectfully traverses the rejections.

Applicant submits that the *Bowman-Amuah* neither teaches nor suggests unamended claims 1-43. Claims 1, 5, 9, 17-22, 27-31, 36, and 40 have been amended for clarity.

Claim 1

Bowman-Amuah describes, in general, a “system, method and article of manufacture for implementing communication services patterns.” *Bowman-Amuah*, Abstract. The Examiner cites *Bowman-Amuah*, col. 58, ln. 53 to col. 59, ln. 52 and Figure 16 as anticipating claim 1. This portion of *Bowman-Amuah* describes “file sharing services [that] allow users to view, manage, read, and write files that may be located on a variety of platforms in a variety of locations.” *Bowman-Amuah*, col. 58, lns. 54-57. *Bowman-Amuah* recites a list of file sharing

products in col. 59, lns. 19-40, including Network File System (NFS), which is described in the Background section of the present application.

For some context into a portion of the Present Application, Applicant has provided a copy below of the Present Application, p. 23, first paragraph, which states:

There are many advantages to providing a hierarchical interface, such as a directory tree structure, for a database. Many clients already understand file systems and do not need special database software to formulate an SQL query. The directory tree structure allows many applications to present data in a familiar way to many clients. Many different tools are able to access a database without having database specific software. The database is reduced to flexible file system. The present invention, in at least one embodiment, creates an NFS interface with a rearrangeable hierarchy, creating a virtual file system based on a database. In addition, due to the individual client views, the present invention, in at least one embodiment, utilizes NFS to mount whatever file structure the database administrator selects for a particular client. Embodiments of the present invention enable flexible restriction and presentation of data.

Bowman-Amuah provides neither teachings nor suggestions that could achieve any such advantages. NOTE: The claims of the Present Application are not limited by specific embodiments of the disclosure.

Applicant respectfully submits that the “file sharing services” of *Bowman-Amuah* do not teach or suggest anything regarding “a database”, “a plurality of nonhierarchically organized classifiers of data” that are included in the database, and “organizing a set of the [] nonhierarchically organized classifiers into a first hierarchical data structure.” Present Application, claim 1. (emphasis added). In contrast to the present invention of claim 1, the cited portion of *Bowman-Amuah* specifically only relates to “file sharing services.” For example, regarding NFS, “NFS communicates in terms of directories and files” organized in a directory structure rather than a database. Present Application, Background, page. 3, lns.2-15. In contrast to the present invention, *Bowman-Amuah* does not teach or suggest “providing an interface to a database, wherein the database includes a plurality of nonhierarchically organized classifiers of data.” Present application, claim 1. Applicant respectfully submits that Figure 16 of *Bowman-Amuah* further supports Applicant’s remarks. Figure 16 depicts a file structure and file sharing services between a client and server. Figure 16 contains no depiction of a “database”,

“nonhierarchically organized classifiers” of the database, or “organizing a set of the []
nonhierarchically organized classifiers into a first hierarchical data structure.”

Claim 5

The Examiner cites *Bowman-Amuah*, col. 31, lns. 12-65 and Figures 10, 11, and 12 as anticipating claim 5. *Bowman-Amuah* states that “Netcentric enables sharing of data and content between individuals and applications.” *Bowman-Amuah*, col. 31, lns. 39-41. Although *Bowman-Amuah* describes and illustrates in Figures 10, 11, and 12 an “emerging architecture style”, it does not teach or suggest anything about a database, in particular a “database [that] includes nonhierarchically organized classifiers(1:M) of data and data linked to at least one of classifiers(1:M).” Even more specifically, in contrast to the present invention of claim 5, *Bowman-Amuah* neither teaches nor discloses “creating a view for a client, wherein the view organizes a set of the nonhierarchically organized classifiers (1:M) into a hierarchical data structure according to characteristics of the client.” Present application, claim 5. (emphasis added).

Claim 9

The Examiner cites *Bowman-Amuah*, col. 244, lns. 3-7 and Figure 115 as anticipating claim 9. The cited portion states:

FIG. 115 is an illustration of a Customer object 11500 in an object-based system 11502 streaming itself into a stream 11504, the stream 11504 being sent to a non-object system 11506, this stream 11504 being read and the information is inserted into a relational database 11508.

First, Applicants respectfully submit that at a high level, the cited reference teaches that the “information is inserted into a relational database” rather than “producing a set of data according to the database query ... and presenting the set of data to the client” as recited by claim 9. In further contrast, the cited reference refers to classifier examples “Name”, “Sex”, and “Age” and data “Fred”, “Male”, and “25”. Thus, *Bowman-Amuah* does describe a set of

nonhierarchically organized data in a database. However, *Bowman-Amuah* neither teaches nor discloses, “translating the request into a database query for data classified by the nonhierarchically organized classifiers and producing a set of data according to the database query, the set of data organized in a hierarchical data structure.” Present application, claim 9. One general definition of “hierarchical” is “classified according to various criteria into successive levels or layers.” The data of *Bowman-Amuah* is arbitrarily associated with no hierarchical data structure.

Claims 10 and 11

The Examiner cited col 58, ln. 53 to col. 59, ln. 52, Fig. 16 as anticipating claim 10 and col. 215, ln. 62 to col. 216, ln. 30, and Figure 74 of *Bowman-Amuah* as anticipating claim 11. Claim 10 recites “looking up the file handle in an ILocation table to obtain an ILocation; and formulating a database query to query a defined set of data, the query formulated from the ILocation.”

Claim 11 recites:

wherein formulating a database query to query a defined set of data comprises:

determining if the ILocation contains bound classifiers, each bound classifier being bound by a constraining value;

if the ILocation contains bound classifiers, adding a clause to the database query for each bound classifier in the ILocation, each clause formulated to eliminate data from the defined set of data that has a defined value corresponding to the constraining value of the bound classifier;

determining if the ILocation contains unbound classifiers;

if the ILocation contains unbound classifiers, adding a first clause to the database query for the first unbound classifier, the clause formulated to produce a listing of distinct values set for the defined set of data, the distinct values corresponding to the first unbound classifier, and further, adding a second clause to the database query for the first unbound classifier, the second clause formulated to select data from the set of defined data that has the value of the first unbound classifier not set to a value; and

if the ILocation does not contain unbound classifiers, adding a clause to the database query that selects all data in the defined set of data.

Applicants respectfully submit that although *Bowman-Amuah* does teach in the cited portion that “FIG. 74 illustrates a customer server 7400 publicly announcing its interfaces 7402” and “until that time, a client can't find the operations and can't use them. Thus, the Server must use the Lookup or Naming pattern to register its interfaces (not methods). Once the interfaces have been registered with such a service, any client can go to the Naming Service, locate an interface, and access an operation in that interface.” However, Applicant respectfully submits that *Bowman-Amuah* does not mention of, and, thus, neither teaches nor suggests the limitations of claims 10 and 11.

Claims 17 and 21

The Examiner cites *Bowman-Amuah*, col. 35, lns. 5-44 as anticipating claims 17 and 22. The Examiner quoted from the reference, “Desktop Manager Services implement the desktop metaphor. The desktop metaphor as the name suggests is a style of user interface that tries to emulate the idea of a physical desktop allowing you to place documents on the desktop, launch applications by clicking on a graphical icon, or discard files by dragging them onto a picture of a waste basket. Most Window Systems contain elementary Desktop Manager functionality (e.g., the Windows 95 desktop), but often more user friendly or functional Desktop Manager Services are required.”

In contrast to the present invention of claims 17 and 22, *Bowman-Amuah* neither teaches nor suggests “instructions to cause the processor to graphically display a hierarchy of data classification information” (claim 17) or “receiving a request for hierarchical classification information” (claim 22) “wherein the data classification information represents classifiers of data, the classifiers are nonhierarchically organized in at least one database, the data is contained in the at least one database, the data is at least a portion of all data contained in the at least one database, and each datum is classified by at least one nonhierarchically organized classifier.” Present application, claims 17 and 22. (emphasis added).

Claim 27

The Examiner cites *Bowman-Amuah*, col. 31, lns. 12-65 and Figures 10, 11, and 12 as anticipating claim 27. *Bowman-Amuah* states that “Netcentric enables sharing of data and content between individuals and applications.” *Bowman-Amuah*, col. 31, lns. 39-41. Although *Bowman-Amuah* describes and illustrates in Figures 10, 11, and 12 an “emerging architecture style”, it does not teach or suggest anything about a database, in particular a “computer readable medium having stored thereon a hierarchical data structure of classifiers of a database, wherein the classifiers include nonhierarchically organized classifiers.” Present application, claim 27. Even more specifically, *Bowman-Amuah* neither teaches nor suggests “creating a view for a client, wherein the view organizes a set of the nonhierarchically organized classifiers(1:M) into a hierarchical data structure according to characteristics of the client” and “organizing data into the hierarchical data structure according to the set of the classifiers(1:M).” Present Application, claim 27.

Claim 31 and 36

Claims 31 and 36 stands rejected under the same provisions of *Bowman-Amuah* as claim 27. For reasons similar to claim 27, Applicant respectfully submits that *Bowman-Amuah* neither teaches nor suggests “a database, wherein the database includes nonhierarchically organized classifiers(1:M) of data and data linked to at least one of classifiers(1:M)” and “instructions for enabling a computer system to organize a set of the nonhierarchically organized classifiers(1:M) into a first hierarchical data structure according to a view established for a first client and organize a second set of the nonhierarchically organized classifiers (1:M) into a second hierarchical data structure according to a view established for a second client” as recited by claims 31 and 36.

Claim 40

The Examiner cites *Bowman-Amuah*, col. 225, lns. 34-67 and Figure 89 as anticipating claim 40. *Bowman-Amuah* states that “Figure 89 illustrates [sic] the manner in which the present

invention uses a Globally Addressable Interface 8900 to obtain a Locally Addressable Interface 8902 to a specific Customer Object 8904.” *Bowman-Amuah*, col. 225, lns. 33-36. However, *Bowman-Amuah* does not mention of, and, thus, neither teaches nor suggests a “database [that] includes nonhierarchically organized classifiers(1:M)” and “instructions for enabling the data processing system to: organize a set of the nonhierarchically organized classifiers(1:M) into a first hierarchical data structure according to a view established for a first client and organize a second set of the nonhierarchically organized classifiers (1:M) into a second hierarchical data structure according to a view established for a second client” as recited by claim 40.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, if this application is not in condition for allowance, Applicant requests a telephonic interview between the examiner and the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Fee Amendment, COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450, on January 27, 2004.



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Date of Signature

Respectfully submitted,



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